PHP21

TRENDS IN PHARMACEUTICAL SPENDING GROWTH IN THE UNITED STATES, 1998–2002

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OBJECTIVES: Increasing drug utilization, increasing average drug cost, or both may be responsible for pharmaceutical spending growth in the US. Recent trends in outpatient drug utilization were examined to assess the relative contribution of both factors. **METHODS:** Five-year trends in expenditures and prescribing rates for outpatient drugs were estimated by analyzing the most recently available nationally representative data from the Medical Expenditure Panel Survey (MEPS), National Ambulatory Medical Care Survey (NAMCS) and National Hospital Ambulatory Medical Care Survey (NHAMCS). **RESULTS:** MEPS data indicate that from 1998 to 2002 outpatient prescription drug expenditures (excluding inpatient prescriptions, over-the-counter medicines and samples) nearly doubled from $78 billion to $151 billion. Total number of prescription drug purchases increased by 37%, while average cost per prescription increased by 41%. Over the same period, NAMCS and NHAMCS data reveal that physician office, hospital outpatient department and emergency department visits accounted for 81%, 8%, and 11%, respectively, of medications given at outpatient visits (prescribed or provided). For visits at which medications were given, number of visits increased by 6.9%, 12.6% and 16.6%, and number of medications per visit increased by 6.6%, 8.5%, and 13.5% for physician office, outpatient department, and emergency department visits, respectively. However, the proportion of physician office and outpatient department visits at which drugs were given remained relatively constant at approximately 65%. The proportion of emergency department visits at which drugs were given increased from 71.3% to 75.8%. **CONCLUSION:** Total drug utilization and average drug cost both increased to a comparable degree between 1998 and 2002. Although the total number of visits and the average number of drugs given per visit increased, the proportion of health care visits at which outpatients received drugs or prescriptions was relatively stable. Increased utilization was greater for emergency department visits than for physician office or hospital outpatient department visits.

PHP22

IMPACT OF HEALTH INSURANCE ON HEALTH-RELATED QUALITY OF LIFE

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OBJECTIVES: Relationships between health insurance status and health-related quality of life (HRQOL) were investigated. **METHODS:** The 2000 Medical Expenditure Panel Survey data were analyzed to examine relationships between health insurance status and health-related quality of life. HRQOL was measured using the SF-12 Physical Component Summary (PCS) and SF-12 Mental Component Summary (MCS). The sample included adults aged 25 to 64 years who did not have Medicaid or Medicare coverage. Respondents who were insured for only part of the year were excluded from the analysis. Survey weighted multiple regression models using SAS version 8.2 were used for the analysis. The analysis controlled for sociodemographic variables, attitudinal variables and medical conditions. The analysis also investigated and controlled for the possible endogeneity of the health insurance status variable in the models. **RESULTS:** Of the 8141 adults in the sample that met inclusion criteria, 1449 (17.79%) were without health insurance for the entire year. Tests were positive for endogeneity of the health insurance status in PCS model but not in the MCS model. After adjusting for covariates that included age, gender, race, education, income, attitude towards the value of health insurance and health care, and presence or absence of each of nine reported medical conditions, individuals without health insurance had significantly lower PCS scores than those with health insurance. Individuals with family income above 200% of federal poverty level had a higher detrimental effect of absence of health insurance on PCS compared to individuals with family income below 200% of federal poverty level (Beta = −10.85 versus Beta = −8.21). The adjusted adverse effect of no health insurance also was significant in the MCS model (Beta = −1.43; SE = 0.49). **CONCLUSIONS:** The detrimental effect of lack of health insurance on HRQOL equals or exceeds the detrimental effect of many serious medical conditions on HRQOL.

PHP23

FINANCING TO MEDICINES IN MEXICO

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OBJECTIVES: The objectives of this work are oriented in the first place to discuss the modalities of the financing of medicines, in special to study the characteristics of the access forms and financing to medicines according to the level of the income of the household in Mexico. In the industrialized countries the forms of financing of medicines, like the financing to the services of health is made by means of some scheme of copayment or subsidy the vulnerable groups. But in the non industrialized countries the main form of financing of medicines comes from the out-of-pocket household which is very inequitative. **METHODS:** For this study the registries of the surveys of households income by 2002 of Mexico to study the medicine expenditure by deciles of income. With this information the coefficients of Gini and the curve of Lorenz are considered. Additionally it is used the public and private information on the price and the cost in medicines. **RESULTS:** The access to medicines in Mexico is not related to the necessities of health but to the availability of income of the households, because 85 % of the medicines are acquired by means of the out-of-pocket money of households, because the social security provides free of charge medicines only 15 % of them. The income survey cost of the homes sample that 39 % of the medicine consumption in the private market both make last deciles of greater income; also one is that the consumption of the decil of greater income is four times superior to the one of the population with smaller income. **CONCLUSIONS:** The access to medicines in Mexico are not related to health needs but to household income. Also medicine prices constitutes an effective barrier to medicine acces to a suitable therapy.

PHP24

THE DETERMINANTS OF EXPENDITURES ON PHARMACEUTICALS AND OTHER MEDICAL NON-DURABLES IN OECD COUNTRIES

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OBJECTIVES: To investigate the determinants of expenditures on pharmaceuticals and other medical non-durables in OECD (Organization for Economic Cooperation and Development) countries. **METHODS:** This is a cross-sectional study using year 2000 data for twenty-seven OECD countries. The dependent

variable is per capita pharmaceutical and other medical non-durable expenditures. Explanatory variables investigated include per capita GDP (Gross Domestic Product), % of elderly population (65+ years), % of population with higher education (college+), school expectancy, calorie intake per capita per day, alcohol consumption in liters per capita (age 15+), % of expenditures on pharmaceuticals and other medical non-durables financed by the public sector, number of practicing physicians, % of population with public health care coverage, number of doctor consultations per capita and % urbanized. All monetary values were converted into US dollars based on GDP purchasing power parity. A log-linear (constant elasticity) regression model was used. **RESULTS:** The final model included 6 explanatory variables with an adjusted R2 = 0.744. The White test was used to correct heteroskedasticity. The natural log of GDP per capita (b = 0.455, p = 0.003), percent of elderly population (b = 0.039, p = 0.01), number of doctor consultations (b = 0.028, p = 0.008), and calories intake (b = 0.0003, p = 0.002) had positive, statistically significant effects on pharmaceutical expenditures at á < 0.01. Percent of population with higher education (b = 0.012, p = 0.22) and public financing (b = –0.001, p = 0.43) were not significant. Alcohol consumption (another indicator of lifestyle behaviors); number of physicians and public health care coverage (indicators of relative size of the health care system); urbanization (indicator of development); and school expectancy (another indicator of educational development) did not contribute to the model. **CONCLUSIONS:** OECD countries with more wealth, more elderly people, more doctor consultations, and more calorie intake tend to spend more on pharmaceuticals and other medical non-durables. Size of the health care system and financing methods do not explain differences in pharmaceutical expenditures.

PHP25

ANALYSIS OF PRESCRIBING PATTERN WITH THE NEGATIVE LIST FORMULARY SYSTEM IN KOREA

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OBJECTIVES: All approved pharmaceutical products in Korea are available for reimbursement except some products on the negative list. The aim of this study is to examine how many products are actually prescribed by doctors and to compare the prescribing patterns in inpatient and outpatient settings. **METHODS:** Prescription data were obtained from the Korean National Health Insurance claims database of April 2004 for all the hospitals and clinics in Korea. The numbers of prescribed products and ingredients were calculated along with the drug expenditure incurred. **RESULTS:** In April 2004, 19,452 pharmaceutical products (5120 ingredients) were on the list of reimbursable drug formulary. Among them 9423 products (3208 ingredients), 48.2% of the reimbursable products, were actually prescribed for inpatients. For outpatients, 11,823 products (3731 ingredients), 60.8% of reimbursable products, were prescribed. Although more than 9000 pharmaceutical products were prescribed by doctors, top quintile high-expenditure drugs of 1885 took up 94% of total drug expenditure for inpatients, whereas top quintile 2365 products did 91.5% for outpatients. Also, top quintile high-expenditure ingredients of 632 accounted for 93% of total drug expenditure for inpatients, whereas those of 746 ingredients did 92% for outpatients. **CONCLUSIONS:** Unlike in western societies, more products and ingredients were prescribed for outpatients than for inpatients in Korea. This study also showed that although various pharmaceutical products were prescribed, the top 20% (high-expenditure drugs) of all products and ingredients took up the lion's share of total drug expenditure. It suggests that there is a need of introduction of positive list formulary system for the efficient drug benefit management.

PHP26

THE CURRENT AND FUTURE OF PHARMACOECONOMICS IN UKRAINE

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OBJECTIVES: In Ukraine the government authorizes the State program of maintenance of the population by medical products for 2004–2010, which provides use of pharmacoeconomic analysis methods. The State Formulary for pharmaceutical provision are formed. **METHODS:** We have analyzed all available pharmacoeconomic studies published in Ukraine for 1998–2004 to assess methodological problems and potential for future use of pharmacoeconomics in drug policy. **RESULTS:** We have established, that the quantity of published pharmacoeconomic researches has increased in 7.3 times. Methodological quality is generally insufficient. Cost-minimization is the preferred technique although differences in effectiveness are not properly assessed. Few studies desribe costing and cost-effectiveness methodologies. Modeling studies are weak due absence of epidemiological and economical database. Societal perspective is rarely used—the health care perspective prevails. Little study exist in Qol measurement and cost-utility techniques. Industry use of pharmacoeconomics is mainly for supporting marketing and sales. Physicians are increasingly receptive of pharmacoeconomic analysis, but little value on modeling approaches. We develop methodical recommendations on use of pharmacoeconomic analysis methods in Ukraine, authorized by Ministry of Health. We have conducted the analysis of consumption of antidiabetic agents in the defined daily doses. We published the circular "A Technique of pharmacoeconomical analysis 'cost-effectiveness' for definition of need in medicinal tools in Ukraine". **CONCLUSION**: Pharmacoeconomics must improve methodological standarts in Ukraine. This is a task for both government and industry with the purpose of creation of State Formulary.

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QUALITY OF ECONOMIC MODELS IN DOSSIERS SUBMITTED UNDER THE AMCP FORMAT

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OBJECTIVES: To investigate the quality and completeness of economic models submitted by pharmaceutical manufacturers to health plans under the Academy of Managed Care Pharmacy (AMCP) Format for formulary submissions, and to compare economic models of "me-too" versus drugs judged to have significant competitive edge. **METHODS:** We analyzed economic models included in AMCP-Format dossiers submitted by pharmaceutical companies to the pharmacy services staff of Premera Blue Cross (Mountlake Terrace, WA, enrollment 1.5 million) in 2003. "Economic models" were defined as mathematical simulations that combined clinical and cost data to estimate the economic value of a drug. We assessed models' compliance with criteria recommended by the Panel on Cost-Effectiveness in Health and Medicine, including: justification of model type; statement of time horizon and discount rate; discussion and reporting of productivity changes; separate reporting of resource quantities from prices; comparison against relevant alternatives;